

# **FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy**

**Chicago Office**

## **Demonstration of Electron Beam Technology for SO<sub>2</sub> and NO<sub>x</sub> Reduction**

**Funding Opportunity Number: DE-PS02-08FE68154**

**Announcement Type: Initial**

**CFDA Number: 81.089**

**Issue Date: September 30, 2008**

**Application Due Date: December 1, 2008**

## NOTE: REQUIREMENTS FOR GRANTS.GOV

**Where to Submit:** Applications must be submitted through Grants.gov to be considered for award. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately. Remember you have to update your CCR registration annually. If you have any questions about your registration, you should contact the Grants.gov Helpdesk at 1-800-518-4726 to verify that you are still registered in Grants.gov.

**Registration Requirements:** There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See [www.grants.gov/GetStarted](http://www.grants.gov/GetStarted). Use the Grants.gov Organization Registration Checklist at <http://www.grants.gov/assets/OrganizationRegCheck.pdf> to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at least 21 days to complete these requirements. It is suggested that the process be started as soon as possible.

**IMPORTANT NOTICE TO POTENTIAL APPLICANTS:** When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e. Grants.gov registration).

### Microsoft Vista and Office 2007 Compatibility

Grants.gov is currently incompatible with both the new Microsoft (MS) Vista Operating System and the new Microsoft (MS) Office 2007 versions of Word, Excel, and Power Point. In order to create and submit your application to Grants.gov, you must find a computer with a previous version Microsoft Operating System, such as Windows XP.

If you attach a file created using MS Office 2007, you will not get an error message when you submit the application, HOWEVER, your entire application will not be able to be processed or accepted at Grants.gov and will not reach DOE. Grants.gov can accept applications with attachments created in MS Office 2007 if the attachments are saved in the prior format. See the [http://www.grants.gov/assets/Vista\\_and\\_office\\_07\\_Compatibility.pdf](http://www.grants.gov/assets/Vista_and_office_07_Compatibility.pdf) for detailed instructions on how to do this. A file created in MS Office 2007 can be identified by the "x" at the end of the file extension, for example "sample.docx" for a Word file. Contact Grants.gov at 1-800-518-4726 with any questions.

**Questions:** Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov). Part VII of this announcement explains how to submit other questions to the U.S. Department of Energy.

### Application Receipt Notices

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five e-mails. It is extremely important that the AOR watch for and save each of the e-mails. It may take up to two (2) business days from application submission to receive e-mail Number 2. When

the AOR receives e-mail Number 5, it is their responsibility to follow the instructions in the e-mail to logon to IIPS and verify that their application was received by DOE. The titles of the five e-mails are:

- Number 1 - Grants.gov Submission Receipt Number
- Number 2 - Grants.gov Submission Validation Receipt for Application Number
- Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number
- Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number
- Number 5 - DOE e-Center Grant Application Received

The last e-mail will contain instructions for the AOR to register with the DOE e-Center. If the AOR is already registered with the DOE e-Center, the title of the last e-mail changes to:

Number 5 - DOE e-Center Grant Application Received and Matched

This e-mail will contain the direct link to the application in IIPS. The AOR will need to enter their DOE e-Center user id and password to access the application.

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Budget Justification Guideline	[ <i>Budget Justification Guideline.doc</i> ]
Environmental Evaluation Notification Form (EENF)	[ <i>EENF.doc</i> ]

## **PART I – FUNDING OPPORTUNITY DESCRIPTION**

### **A. SUMMARY**

The United States Department of Energy, Chicago Office (DOE/CH, or DOE) is competitively soliciting applications for a requirement titled “Demonstration of Electron Beam Technology for SO<sub>2</sub> and NO<sub>x</sub> Reduction.”

Pursuant to Section 416 of the Energy Policy Act of 2005, the Department of Energy is making available, up to \$5,000,000.00 to initiate the demonstration of advanced technologies that use electron beam technology to achieve high levels of SO<sub>2</sub> and NO<sub>x</sub> reduction from coal-based power system flue gas. This technology would typically employ particle collectors to remove fly ash from the flue gas, followed by spray drying to lower the flue gas temperature and increase humidity. Ammonia is added to the flue gas and the gas passes into an electron beam (or e-beam) reactor, where it is irradiated by a beam of high-energy electrons. The electron beam dissociates the water vapor and oxygen, creating oxidants which react with SO<sub>2</sub> and NO<sub>x</sub> to form sulfuric and nitric acids, respectively. The acids react with the injected ammonia to form ammonium sulfate and nitrate salts. The salts are removed from the flue gas by a wet electrostatic precipitator. The byproduct can be used as agricultural fertilizer and/or disposed of in a landfill or other impoundment.

For this announcement, DOE will support a grant for the definition, feasibility and design for demonstration of advanced technologies that use electron beam technology to achieve high levels of SO<sub>2</sub> and NO<sub>x</sub> reduction from coal-based power system flue gas. The scope of work under the grant resulting from this announcement will be limited to the definition, feasibility and design stages of demonstration. The construction and operation phases of the demonstration are beyond the scope of this announcement. However, information related to the construction and operation phases will be required to assess the feasibility of this project. The Department will contribute up to 50 percent of the cost of the activities subject to the DOE share not exceeding \$5,000,000.00. As part of the application, the Applicant shall identify a site in the United States where the technology will be demonstrated.

#### **STATUTORY AUTHORITY**

Public Law 95-91, U.S. Department of Energy Organization Act  
Public Law 109-58, Energy Policy Act (EPACT) of 2005

#### **APPLICABLE REGULATIONS**

U.S. Department of Energy Financial Assistance Rules (10 CFR Part 600)

### **B. PURPOSE AND OBJECTIVES**

The purpose of this announcement is to competitively solicit applications to support, under a grant, the definition, feasibility, and design for a demonstration project using electron beam methods for emission reductions in coal-based electric generation plants. The design is to be performed for an electron beam technology that has progressed beyond the research and development stage to a point of readiness for operation at a scale that, once demonstrated, can be replicated into commercial practice within the coal-based electric power industry. In other words, it is anticipated that this announcement will fund a more detailed design effort for technology that has already progressed through the conceptual/preliminary design stage and for

which the Applicant has already performed a preliminary assessment of the technical and economic feasibility of the technology.

The objective of the demonstration project is to use electron beam technology to achieve high levels of SO<sub>2</sub> and NO<sub>x</sub> reduction from coal-based power system flue gas. This technology would typically employ particle collectors to remove fly ash from the flue gas, followed by spray drying to lower the flue gas temperature and increase humidity. Ammonia is added to the flue gas and the gas passes into an electron beam (or e-beam) reactor, where it is irradiated by a beam of high-energy electrons. The electron beam dissociates the water vapor and oxygen, creating oxidants which react with SO<sub>2</sub> and NO<sub>x</sub> to form sulfuric and nitric acids, respectively. The acids react with the injected ammonia to form ammonium sulfate and nitrate salts. The salts are removed from the flue gas by a wet electrostatic precipitator. The byproduct can be used as agricultural fertilizer and/or disposed of in a landfill or other impoundment.

## **PART II – AWARD INFORMATION**

### **A. TYPE OF AWARD INSTRUMENT**

DOE anticipates awarding a single grant under this program announcement. A model grant is a separate attachment to this announcement. Clauses may be added or deleted upon completion of negotiation of the grant.

### **B. ESTIMATED FUNDING.**

DOE anticipates that up to \$5,000,000.00 for the DOE share of allowable costs may be available for award under this announcement.

### **C. MAXIMUM AND MINIMUM AWARD SIZE**

Ceiling (i.e., the maximum amount for an individual award made under this announcement): DOE is not limiting the maximum value of the award, but DOE's cost share shall be no greater than 50 percent of the total budget, or \$5,000,000.00, whichever is less.

Floor (i.e., the minimum amount for an individual award made under this announcement): DOE anticipates the minimum value of the award to be \$0.

### **D. EXPECTED NUMBER OF AWARDS**

DOE anticipates making a single award under this announcement.

### **E. ANTICIPATED AWARD SIZE**

The anticipated award size which includes both the DOE share and Recipient cost share would be \$10,000,000.00, where DOE may be able to provide up to \$5,000,000.00 to the selected Recipient.

### **F. PERIOD OF PERFORMANCE**

DOE anticipates the grant project performance period will be commensurate with the complexity of the technology and scope of the project, and it is estimated to be for one to two years.

### **G. TYPE OF APPLICATION**

DOE will accept new applications under this announcement. The Applicant may submit only one application. The application must have its own unique title on the subject line (i.e., project title and principal investigator/project director). The Applicant must download and complete an application package in Grants.gov.



## **PART III – ELIGIBILITY INFORMATION**

### **A. ELIGIBLE APPLICANTS**

In accordance with Sections 2 and 989 of EPACT 2005, all types of entities, including DOE/NNSA National Laboratory Contractors, are eligible to apply, except for other Federal agencies, non-DOE/NNSA Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

### **B. COST SHARING**

#### **1. Cost Share**

The Applicant's cost share must be at least 50% of the total allowable costs for demonstration and commercial application projects (i.e., the sum of the Government share, including DOE/NNSA National Laboratory contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 10 CFR Part 600 for the applicable cost sharing requirements.)

During each budget period of the project, Applicants shall share at least 50% of the total budget period costs. Cost sharing ratios may vary between budget periods but not within a budget period. All costs will be shared between DOE and the Recipient on an "as expended", dollar-for-dollar basis.

In order to be recognized as allowable cost sharing, a cost must be allowable in accordance with the applicable Federal cost principles and DOE Regulations (10 CFR 600.123, 224, and 313) governing cost sharing. Cost sharing may be in various forms or combinations, including cash outlays and in-kind contributions. The value of in-kind contributions not requiring cash outlays (i.e., existing assets) shall be prorated over the life of the project, beginning when the in-kind contribution is initially required for performance of the Grant.

Failure to provide the detailed cost information as described in the instructions will result in an incomplete application. A 50% minimum cost share by the Applicant is required by this announcement, therefore, the Applicant shall stipulate in the application the source and amount of cost sharing and the value of any Third Party in-kind contributions proposed to meet the requirement. If any team member is unable to fulfill its proposed cost share contribution, the prime Applicant is ultimately responsible for the total Applicant cost share contribution.

#### **2. Unallowable Costs**

Reference 10 CFR Part 600 and applicable subparts B, C, and D for allowable cost guidance.

### **C. OTHER ELIGIBILITY REQUIREMENTS**

#### **1. Team Arrangements**

Entities proposing as a team must designate a lead organization. Applications must be submitted

on behalf of the team members by the lead organization. DOE plans to enter into a prime award relationship with the designated lead organization.

Subject to the Intellectual Property provisions of the grant instrument, the Applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues with its team members, including but not limited to, disputes and claims arising out of any agreement between the Applicant and any team member.

## 2. Eligible/Ineligible Entities

The definition of eligible Applicants set forth above in Part III A applies to all parties involved in an application, including the lead organization that actually submits the application (prime Applicant) and all other organizations involved in any way (team members and/or subrecipients or contractors). In accordance with Section 989 of EPACT 2005, DOE/NNSA National Laboratory contractors are the only types of FFRDC contractors eligible to participate. Non-DOE/NNSA Federal agencies and their FFRDC contractors may not be included in applications as participants at any level, including unfunded scientific collaborators.

Additionally, nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995, may not be the lead Applicant, team members, subrecipient and/or contractor; such organizations may not be involved in any way in the application.

**If an application is received that includes an ineligible entity, or an employee of an ineligible entity performing activities as a team member and/or subrecipient or contractor, or as an unfunded contributor to the project, the application will be deemed non-responsive and rejected without further review.**

## 3. DOE/NNSA National Laboratory Contractors

A DOE/NNSA National Laboratory Contractor is eligible to apply for funding under this announcement if its cognizant DOE contracting officer provides written authorization and this authorization is submitted with the application. If a DOE/NNSA National Laboratory Contractor is selected for award as a prime Applicant or as a team member on another entity's application, the proposed work will be authorized under the DOE work authorization process and performed under the Laboratory Management and Operating (M&O) contract. The following wording is acceptable for the authorization:

"Authorization is granted for the \_\_\_\_\_ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary to the missions of the laboratory and will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory."

**Applications that do not include the required cognizant Contracting Officer written authorization as specified above will be deemed non-responsive and rejected without further review.**

If DOE/NNSA National Laboratory contractors participate in the project, such participation shall be subject to the conditions as follows:

- a. Value/Funding: The value of, and funding for, the DOE/NNSA National Laboratory contractor portion of the work will not normally be included in the award to a successful Applicant. Instead, DOE/NNSA will fund a DOE/NNSA National Laboratory contractor through the DOE field work proposal system.
- b. Cost Share: If a DOE/NNSA National Laboratory contractor applies as a prime applicant or as a team member, it cannot provide any of the Applicant's cost share requirement because its funds are considered to be from federal sources. The DOE/NNSA National Laboratory contractor would be expected to arrange for its non-DOE/NNSA National Laboratory contractor team members to provide the required Applicant's cost share requirement. The Applicant's cost share requirement will be based on the total cost of the project. For the purpose of calculating cost share, the total cost of the project is defined as the Applicant cost share plus the DOE cost share. The DOE cost share is further defined as the DOE cost share under the grant plus any applicable DOE-funded DOE/NNSA National Laboratory contract field work proposal.
- c. Responsibility: Subject to the intellectual property provisions of the grant instrument, the Applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues with its team members, including but not limited to, disputes and claims arising out of any agreement between the Applicant and the DOE/NNSA National Laboratory contractor, if the latter is a team member. If an award is made to a DOE/NNSA National Laboratory, all disputes and claims will be resolved in accordance with the terms and conditions of the DOE/NNSA National Laboratory M&O contract with DOE.

#### 4. Mandatory Eligibility Requirements

Applications that fail to meet one or more of these mandatory requirements will be rejected at the initial review stage. In the event that an application is so rejected, a notice will be sent to the Applicant stating the reason(s) that the application will not be considered for an award under this announcement. Applications passing the initial review shall be subject to a comprehensive evaluation.

- The proposed demonstration project must be conducted at a facility located in the United States, as evidenced by a letter of commitment from the owner of the host site.
- The demonstration project must be designed for coal derived flue gas.
- The Applicant must agree to provide a cost share of at least 50 percent of the total project cost as well as during each budget period.
- The proposed project team must be clearly identified and firmly committed to fulfilling its proposed role in the project, as evidenced with letters of commitment from each key team member organization.
- The application must be signed by a responsible official of the proposing organization authorized to contractually bind the organization to the performance of the anticipated grant in its entirety.

## PART IV – APPLICATION AND SUBMISSION INFORMATION

### A. ADDRESS TO REQUEST APPLICATION PACKAGE.

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants,” and then select “Download Application Package.” Enter the Catalog of Federal Domestic Assistance (CFDA) and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package.

### B. LETTER OF INTENT AND PRE-APPLICATION.

#### 1. Letter of Intent

Letters of Intent as to whether your organization plans to apply to this announcement are not required.

#### 2. Pre-application

Pre-applications are not required.

### C. CONTENT AND FORM OF APPLICATION – SF 424

Applicants must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL-Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. **Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.**

#### 1. SF 424 - Application for Federal Assistance

Complete this form first to populate data in other forms. Complete all required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the “Help Mode” (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 21 can be found on the Applicant and Recipient Page at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm), under Certifications and Assurances.

#### 2. Other Attachments Form

Submit the following files with your application and attach them to the Other Attachments Form. Click on “Add Mandatory Other Attachment” to attach the Project Narrative. Click on “Add Optional Other Attachment,” to attach the other files.

##### **Cover Letter File – Mandatory**

The cover letter must be from the Applicant and must identify the Funding Opportunity Announcement number and title in response to which the application is being submitted. The letter must be signed by a responsible official of the Applicant's organization authorized to contractually bind the organization to the performance of the anticipated grant in its entirety (see Part III, Section C.4., Mandatory Eligibility Requirements).

## Project Narrative File - Mandatory Other Attachment

The project narrative must not exceed 80 pages, including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right).

EVALUATORS WILL NOT REVIEW ANY PAGES WITHIN THE PROJECT NARRATIVE IN EXCESS OF 80 PAGES. The font must not be smaller than Arial 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application. See Part VIII.D for instructions on how to mark proprietary application information. Save the information in a single file named "Project.pdf," and click on "Add Mandatory Other Attachment" to attach.

The project narrative must include:

a. General

For the demonstration of electron beam technology for SO<sub>2</sub> and NO<sub>x</sub> reduction, the Project Narrative consists of a discussion of: Technology Merit, Technical Plan and Site Suitability; Commercial Viability and Market Potential; Technical and Management Approach/Capabilities; Funding Plan; and a Financial Business Plan. Additional information including resumes, letters of commitment, financial statements, project management plan, and additional pertinent publications shall be placed in the Appendices. Sections 1 through 8 are submitted as the Project Narrative File, named Project.pdf. Appendices A through G are each submitted separately as separate files.

The Cover Letter and information contained in the appendices shall not count toward the 80 page limit. No material may be incorporated in any application by reference as a means to circumvent the page limitation. Illustrations shall be legible with all text in legible font. Pages shall be sequentially numbered.

b. Project Narrative Format

The Applicant shall include the Project Narrative in the format specified below to facilitate the review process and to ensure that the Applicant addresses all of the technical review criteria. This format relates to the technical evaluation criteria, Part V.A.2. Applicants shall follow the outline shown below, but additional sub-headings may be included as desired.

	Page
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a. Table of Contents	i
b. List of Tables	ii
c. List of Figures	iii
d. List of Abbreviations with Definitions	iv
e. Definitions	v
2. SUMMARY AND INTRODUCTION	#

3. TECHNOLOGY MERIT, TECHNICAL PLAN AND SITE SUITABILITY	#
4. COMMERCIAL VIABILITY AND MARKET POTENTIAL	#
5. TECHNICAL AND MANAGEMENT APPROACH/CAPABILITIES	#
6. FUNDING PLAN	#
7. FINANCIAL BUSINESS PLAN	#
8. BIBLIOGRAPHY AND REFERENCES	#
9. APPENDICES TO PROJECT NARRATIVE (each submitted as a separate file under Add Optional Other Attachment on the Other Attachments Form)	
A. SITE DOCUMENTATION	A1
B. TEAM LETTERS OF COMMITMENT AND AGREEMENTS	B1
C. PROJECT MANAGEMENT PLAN	C1
D. STATEMENTS OF INTEREST FROM POTENTIAL BUYERS	D1
E. FINANCIAL STATEMENTS	E1
F. FINANCIAL MODEL OF DEMONSTRATION PROJECT	F1
G. FINANCIAL COMMITMENT LETTERS	G1

c. Project Narrative Content

The Project Narrative shall consist of the information that follows. In order to produce a comprehensive application for this announcement, the Applicant is required to address, at a minimum, the areas listed below and how they meet the merit review criteria. The Applicant shall submit the information described in each section.

1. CONTENTS AND DEFINITIONS

Information in this section is self explanatory.

Table of Contents  
List of Tables  
List of Figures  
List of Abbreviations with Definitions  
Definitions

2. SUMMARY AND INTRODUCTION

Provide a brief introduction to the demonstration project, including a clear, concise statement of the specific objectives/aims of the proposed project and a description of the technology and an overview of the ownership and financing structure for the demonstration project. Briefly introduce the main parties to the project, and provide the current status of the project. Provide a summary regarding how the project meets the eligibility requirements listed in Part III.C.4, Mandatory Eligibility Requirements.

### 3. TECHNOLOGY MERIT, TECHNICAL PLAN AND SITE SUITABILITY

The proposing team shall provide a description for the demonstration project by including, at a minimum, the following topics:

- Discuss the process concept and how it operates (including preliminary process flow diagram(s) with major equipment items and energy and material balances around each major process unit and the overall plant, indicating temperature, pressure, and composition of major streams). Discussions on the important process chemistry and engineering concepts must be included.
- Discuss and provide evidence of the readiness of the technology for demonstration project at the size proposed.
- If the proposed technology involves hardware, describe the attributes of the device or module being proposed, such as environmental performance, efficiency of operation, or expectations of low-cost producibility. Explain the principles and provide engineering analysis and process data to support the demonstration project.
- Compare the performance of the proposed technology or methodology to current commercial practice for achieving comparable ends and, if appropriate, to other well known technical approaches that are in development.
- Discuss the adequacy, appropriateness, and relevance of the demonstration project to the objectives of the announcement.
- Identify the United States location of the demonstration project. Discuss the adequacy, appropriateness, and relevance of the host site to the objectives of the announcement. In Appendix A, provide documents supporting evidence of the U.S. site availability, such as proof of ownership of the site, a signed option to purchase the site from the site owner, a letter of commitment by the site owner to sell the site to the Applicant or to provide the Applicant access to the site for the project. Also provide in Appendix A any site maps, plot plans, site photographs, etc. necessary to support claims.

### 4. COMMERCIAL VIABILITY AND MARKET POTENTIAL

The proposing team shall demonstrate the commercial viability and market potential of the demonstration project by:

- Substantiating the commercial viability or commercialization potential of the proposed power plant technology, subsystem(s), component(s), or module(s) with clear, concise, complete, research and technology development results, analysis and evaluation. Evidence of market penetration to date and delineation of the present barriers to market entry that will be overcome by the demonstration must be presented. The extent of project team commitment to the demonstration project and subsequent technology commercialization must be demonstrated. Provide statements of interest in

writing from potential purchasers of the proposed technologies as Appendix D;

- Defining cost, performance, process, innovation and learning targets that must be overcome by the demonstration project to achieve market acceptance must be presented. Evidence of direct customer feedback and interactions with respect to the development of the cost, performance, innovation and learning targets presented in the proposal must be shown;
- Providing quantitative analysis of the applicability or retrofitability of the proposed technology, subsystem, component, or module in the existing or new coal-fired power generation market. This is to include discussion, evaluation and analysis of the types, numbers, and percentages of plants, geographical locations, types of fuel, and potential for enhancing electricity reliability of coal-fired power plants;
- Showing how the scale of the proposed technology, subsystem, component, or module is of the appropriate size for commercial acceptance.
- Demonstrating how the demonstration project models, compares to, or builds upon past commercialization successes;
- Providing quantitative analysis to support the degree to which commercial replications are likely to improve electricity reliability on a national scale;
- Providing marketing estimates of the potential for application in domestic and international markets. The proposing team should address, analyze, and evaluate the specific international markets in which the demonstration project applies and make estimates as to the sales and U. S. job creation that could be achieved; and
- Identifying potential spin-off products, sub-systems, components, and modules that may result from the completion of the proposed effort.

## 5. TECHNICAL AND MANAGEMENT APPROACH/CAPABILITIES

The proposing team shall describe its capabilities for performance of the scope of work by including the following:

- Describe the credentials, capabilities, and experience of key personnel by including, in the Resume File, resumes and other information consistent with and appropriate to the role each will play in the proposed grant project;
- Document relevant prior or current corporate experience of participating organizations;



- Show responsibilities and lines of authority among the various project participants, including the Applicant, subrecipients and contractors if applicable, and the roles of key personnel and percentages of their time devoted to the project. In Appendix B, provide signed agreements or letters from team members demonstrating that the proposed team members are fully committed to the project;
- Include a list and brief description of relevant prior or current contracts, grants, or cooperative agreements for the last five years;
- Include a brief description of proposed reporting, public outreach, and project information dissemination activities;
- Include a Project Management Plan for implementing the grant project and achieving the objectives of this announcement. The Project Management Plan establishes the baseline for the scope, schedule, and budget for the grant project and shall include the information given below. The Project Management Plan should be provided as Appendix C, and include:
  - A Work Breakdown Structure (WBS) to at least three levels identifying tasks to be performed under each Budget Period;
  - A Statement of Project Objectives giving detailed description of work to be performed under each task including task deliverables.
  - A Project Schedule for the grant project at the task level of detail which shall follow the structure of the WBS. The schedule should include technical, business, financial, permitting and other factors to substantiate that the grant project will achieve the objectives of this announcement in a timely manner. The schedule should include milestones and decision points; including a Milestone Plan to serve as the baseline for tracking performance of the project and will identify critical path project milestones (no less than 2 per calendar year) for the grant project;
  - A Baseline Cost Plan to establish the budget for accomplishing the planned work. The Baseline Cost Plan should identify the planned cost for each task on a monthly basis and follow the task structure of the Work Breakdown Structure;
  - A description of the project management system to be used for monitoring and control of scope, schedule, and cost including the methodology and implementation of reporting;
  - Grant Project Communication Protocol, to establish the frequency and type of communication between the Recipient and DOE, dependent on the complexity, value, and program significance of the project, to ensure the team has the information necessary to affect timely and effective project management;
  - A Risk Management Plan that includes a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. As a minimum, include the initial identification of significant technical, resource, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues;

- An Intellectual Property Management Plan that ensures compliance with federal Intellectual property law and policy, the public interest in disseminating scientific reports and results, and the rapid transfer of technology for the development of Electron Beam Technology for SO<sub>2</sub> and NO<sub>x</sub> reduction. The intellectual Property Management Plan should address title to subject inventions, intellectual property licensing, ownership of technical data, and reporting of inventions to DOE;
- Facilities And Other Resources: Identify the facilities (e.g., office, laboratory, computer, etc.) to be used at each performance site listed and, if appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Provide any information describing the other resources available to the project such as machine and electronics shops.
- Equipment: List important items of equipment already available for this project and, if appropriate, note the location and pertinent capabilities of each. If you are proposing to acquire equipment, describe comparable equipment, if any, already at your organization and explain why it cannot be used.

## 6. FUNDING PLAN

At the time of application submission, the Applicant must have a plan to obtain the funding for the entire non-DOE share of the total grant project cost under this announcement. The Applicant must submit a funding plan that identifies all sources of project funds.

The Applicant shall provide sufficient evidence to demonstrate its financial capability to fund, or obtain funding, for the non-DOE share of the proposed grant project costs. The Applicant shall include a full description of any liabilities, limitations, conditions or other factors which could affect the availability of Applicant's funding. If Third Party (i.e., not from the Applicant or its parent organization) financing will be a source of grant project funds, the Applicant shall discuss the terms and conditions of such financing. If the application is based on funds from Third Party sources, such as banks or the capital markets, the timing and conditionality of any such funding shall be clearly described. The Applicant must include a letter from the Third Party stating that it is committed to providing a specific minimum dollar amount of cost sharing.

Commitment letters from the Applicant and Third Parties are to be provided in Appendix G.

The Funding Plan must also include a schedule showing the detailed funding sources and uses of funds for the grant project, including the amount and timing for all funding to be provided by non-DOE sources. The sources and uses of funds schedule should be in agreement with the total estimated costs and schedule for expenditures for the grant project.

Financial Statements. The Applicant must provide current financial statements for all business quarters reported on in the current fiscal year, along with audited financial statements for the most recent three fiscal years. Any non-DOE source of financing (e.g., team member, subrecipient or Third Party) that will commit to funding some portion of the Applicant's share of the project costs must also provide audited financial statements as indicated above. If the Applicant or another party does not have audited financial statements, the Applicant or the party should provide equivalent financial statements prepared by the Applicant or the party, in accordance with Generally Accepted Accounting Principles, and certified as to accuracy and completeness by the Chief Financial Officer of the party providing the statements. Financial Statements should be provided in Appendix E.

If in-kind contributions are to be provided to the project, then the Applicant must explain their valuation.

## 7. FINANCIAL BUSINESS PLAN

The Applicant must provide a financial business plan that is specific to the demonstration project. The financial business plan must be based on the economic and business assumptions developed in the application and should demonstrate that the project is financially feasible. This business plan should address the following financing aspects of the project including financing after completion of DOE involvement.

The Financial Business Plan should include:

Project Parties A description of the main parties to the demonstration project, including background, ownership and experience, proposed financial contribution to project, expected financial benefit to each party of the project.

Project Assumptions A description and explanation for each of the financial, economic, and operating assumptions for the demonstration project. The assumptions should be consistent with and supported by the information provided in the Application.

Financial Projections The financial projections should be on an annual basis, commence with the initial project phase and extend to the completion of the demonstration project. Projections should include a statement of revenues and expenses (income statement), balance sheet, and cash flow statement (sources and uses of funds). The projections should be adequately supported. The statements and schedules should be prepared using Excel™ 2003 (or more recent) software as an Excel based model provided in electronic format including cell formulas so that review of the model assumptions and calculations may be facilitated. The financial model should be included in the application as Appendix F. **Attention: See "Microsoft Vista and Office 2007 Compatibility" on Page 2 of this announcement for critical information regarding the use of Microsoft Excel™ file attachments.**

Contracts and Agreements A description of all contracts, agreements, permits, licenses, etc., that will need to be established or obtained to finance the project, and a description of any agreements to be entered into regarding the operation of the project and the responsibilities of the project parties.

## 8. BIBLIOGRAPHY AND REFERENCES (If Applicable)

Provide a bibliography for any references cited in the Project Narrative section. This section must include only bibliographic citations.

## 9. APPENDICES TO PROJECT NARRATIVE (each submitted as a separate file under Add Optional Other Attachment on the Other Attachments Form)

### APPENDIX A: SITE DOCUMENTATION

File name: site.pdf

Provide documents supporting evidence of U.S. site availability, such as ownership of the site, signed option to purchase the site from the site owner, letter of commitment by the site owner to sell the site to the Applicant or provide the Applicant access to the site for the project. Provide any site maps, plot plans, site photographs, etc. necessary to support claims. Save the information in a single file named "Site.pdf" and click on "Add Optional Other Attachment" to attach.

### APPENDIX B: TEAM LETTERS OF COMMITMENT AND AGREEMENTS

File name: Team.pdf

Provide signed agreements or letters from team members demonstrating that the proposed team members are fully committed to the project. Save the information in a single file named "Team.pdf" and click on "Add Optional Other Attachment" to attach.

### APPENDIX C: PROJECT MANAGEMENT PLAN

File name: pmp.pdf

Provide a Project Management Plan including the following information: a Work Breakdown Structure identifying tasks to be performed under each Budget Period; a Statement of Project Objectives giving detailed description of work to be performed under each task (see below); a Project Schedule for the entire grant project at the task level of detail; a Baseline Cost Plan identifying the planned cost for each task on a monthly basis; a description of the project management system for monitoring and controlling scope, schedule, and cost including the methodology and implementation of reporting earned value; a Project Communication Protocol to establish the frequency and type of communication between the Recipient and DOE; a Risk Management Plan that delineates the methodology that will be used to identify and quantify or assess risks; and a Intellectual Property Management Plan that ensures compliance with federal Intellectual property law and policy, the public interest in

disseminating scientific reports and results, and the rapid transfer of technology and addresses title to subject inventions, intellectual property licensing, ownership of technical data, and reporting of inventions to DOE. Save the information in a single file named "pmp.pdf" and click on "Add Optional Other Attachment" to attach.

In announcements such as this one, where the Government does not provide a Statement of Project Objectives (SOPO), the Applicant is to provide one, which the DOE will then use to generate the SOPO to be included in the award. Typically a SOPO consists of the title of the work to be performed, objectives (one paragraph on overall objectives; if applicable, objectives for each phase), project narrative of scope of work to be performed (one-half page), tasks/subtasks to be performed, and, deliverables for each major task.

The project narrative must contain a single, detailed statement of objectives that addresses how the grant objectives will be met. The SOPO must contain a clear, concise description of all activities to be completed during performance of the grant. The SOPO may be released to the public by DOE in whole or in part at any time. It is therefore required that it shall not contain proprietary or confidential business information. The SOPO is generally less than 10 pages in total for the proposed work.

(Note: The Recipient shall provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered to DOE. These reports shall be identified within the text of the SOPO under each major task.)

#### APPENDIX D: STATEMENTS OF INTEREST FROM POTENTIAL BUYERS

File name: buyer.pdf

Provide statements of interest in writing from potential purchasers of the proposed technologies. Save the information in a single file named "buyer.pdf" and click on "Add Optional Other Attachment" to attach.

#### APPENDIX E: FINANCIAL STATEMENTS

File name: fin\_statement.pdf

Provide financial statements for the Applicant and for any team member, subrecipient, Third Party, etc. that will commit to funding some portion of the Applicant's share of the grant project costs. Save the information in a single file named "fin\_statement.pdf" and click on "Add Optional Other Attachment" to attach.

#### APPENDIX F: FINANCIAL MODEL OF DEMONSTRATION PROJECT

File name: fin\_model.xls

Provide a statement of revenues and expenses (income statement), balance sheet, and cash flow statement (sources and uses of funds) prepared using Excel™ 2003 (or more recent) software. The Excel based model should be provided in electronic format including cell formulas so that review of the model assumptions and calculations may be facilitated. Save the information in a

single file named “fin\_model.xls” and click on “Add Optional Other Attachment” to attach.

#### APPENDIX G: FINANCIAL COMMITMENT LETTERS

File name: fin\_commitment.pdf

Provide financial commitment letters from the Applicant and Third Parties for the grant project, including commitments from funding sources for limited recourse project financing. Save the information in a single file named “fin\_commitment.pdf” and click on “Add Optional Other Attachment” to attach.

##### **Commitment Letters from Third Parties Contributing to Cost Sharing**

If a Third Party, (i.e., a party other than the organization submitting the application) proposes to provide all or part of the required cost sharing, the Applicant must include a letter from the Third Party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter should also identify the proposed cost sharing (e.g., cash, services, and/or property) to be contributed. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this information in a single file named “CLTP.pdf” and click on “Add Attachments” in Field 11 to attach.

#### **Project Summary/Abstract File**

The grant project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the Applicant, the project director/principal investigator(s), the grant project title, the objectives of the grant project, a description of the grant project, including methods to be employed, the potential impact of the grant project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5” by 11” paper with 1” margins (top, bottom, left and right) with font not smaller than Arial 11 point. Save this information in a file named “Summary.pdf,” and click on “Add Optional Other Attachment” to attach.

#### **Resume File**

Provide a resume for each key person proposed, including subrecipients, contractors, and consultants if they meet the definition of key person. A key person is any individual who contributes in a substantive, measurable way to the execution of the project. The biographical information for each resume must not exceed 2 pages when printed on 8.5” by 11” paper with 1 inch margins (top, bottom, left, and right) with font not smaller than Arial 11 point and should include the following information, if applicable:

**Education and Training.** Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

**Professional Experience.** Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

**Publications.** Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights and software systems developed may be provided in addition to or substituted for publications.

**Synergistic Activities.** List no more than 5 professional and scholarly activities related to the effort proposed.

Save all resumes in a single file named "bio.pdf" and click on "Add Optional Other Attachment" to attach.

### **SF 424 A Excel, Grant Budget Information – Non-Construction Programs File:**

You must provide a separate budget for each year of support requested and a cumulative budget for the total project period for the proposed work under the proposed grant under this announcement. Use the SF 424 A Excel, "Budget Information – Non Construction Programs" form on the Applicant and Recipient Page at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm). You may request funds under any of the Object Class Categories as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV. G – Funding Restrictions). Save the information in a single file named "SF424A.xls," and click on "Add Optional Other Attachment" to attach.

### **Grant Budget Justification File**

Save the budget justification information, as specified below, in a single file named "Budget.pdf," and click on "Add Optional Other Attachment" to attach. Supporting cost detail shall be submitted as indicated by the instructions on the budget form and/or the supporting cost detail requirement below. The Applicant shall provide a detailed budget, identifying costs for each phase of the grant (e.g., Definition, Feasibility, and Design) as well as for the total grant project. The proposed budget and budget justification file must include all costs (both DOE-funded as well as non-DOE-funded costs, i.e., cost sharing of the Applicant). Narrative explanations of budget items should be provided to supplement the Cost Detail Requirements below.

#### **Grant Budget Justification Cost Detail Requirements**

In the Budget Justification, the following cost detail is required for the proposed cost categories in the budget. **The Applicant shall provide the detailed cost information as described in the instructions. A 50% minimum Applicant cost share is required by this announcement, therefore, the Applicant shall stipulate in the application the source and amount of cost sharing and the value of any Third Party in-kind contributions proposed to meet the requirement.** Additionally, teaming members and subrecipients expected to perform work estimated to be more than \$500,000.00 or 50% of the total work effort, whichever is less, are also required to submit the information below with their respective budgets. A sample format for

providing this supporting documentation is available as a separate attachment to this announcement. See Budget Justification Guideline.doc.

**Personnel** -- In support of the proposed personnel costs, provide a supplemental schedule that identifies the labor hours, labor rates, and cost by labor classification for each budget period. Also indicate the basis of the labor classification, number of hours, and labor rates. An example of the basis for the labor classification and number of hours could be past experience, engineering estimate, etc. An example of the basis for the labor rates could be actual rates for the individuals who will perform the work or an average labor rate for the labor classification or a departmental average rate.

**Fringe Rate** -- Provide the method used to calculate the proposed rate amount. If a fringe benefit rate has been negotiated with, or approved by, a Federal Government agency, provide a copy of the agreement. If no rate agreement exists, provide a detailed list of the fringe benefit expenses (e.g., payroll taxes, insurances, holiday and vacation pay, bonuses) and their associated costs. Identify the base for allocating these fringe benefit expenses.

**Travel** -- For each proposed trip, provide the purpose, number of travelers, travel origin and destination, number of days, and a breakdown of estimated costs for airfare, lodging, meals, car rental, and incidentals. The basis for the airfare, lodging, meals, car rental, and incidentals must be provided, such as past trips, current quotations, current version of the Federal Travel regulations, etc.

**Equipment** -- Provide an itemized list of each piece of equipment, its unit cost, and the basis for estimating the cost, for example, vendor quotes, catalog prices, prior invoices, etc. Briefly justify the need for items of equipment to be purchased.

**Materials and Supplies** -- Provide an itemized list of materials and supplies that have an acquisition cost greater than \$5,000, identify the quantity of each item, its unit cost, and the basis for estimating the cost, for example, vendor quotes, catalog prices, prior invoices, etc.

**Subrecipients** -- Identify EACH planned subrecipient, including any contractor, and its total proposed costs. (Note: Each proposed subrecipient's cost must also be included as part of the Applicant's budget.) A separate budget or cost proposal as may be applicable and supporting budget justification or cost/price detail must be provided for each subrecipient (including any DOE/NNSA National Laboratory M&O contractor) that is expected to perform work estimated to be more than \$500,000.00 or 50 percent of the total work effort (whichever is less). (See the Sections on Grant Subaward Budget File(s) and Grant Subaward Budget Justification File(s) that follow.) In addition, the Applicant shall provide the following information for EACH planned subaward: a brief description of the work to be contracted out; the number of proposals/quotes solicited and received; the cost or price analysis performed by the Applicant; names and addresses of the subrecipients tentatively selected and the basis for their selection (e.g., competitively selected - low bidder from 2 or more comparable (apples to apples) contract quotes; delivery schedule, or technical competence); type of subaward and estimated cost and fee or profit, if any (see restriction under the Cost Sharing Section that follows); and affiliation with the Applicant, if any.



Each recipient and subrecipient must comply with 10 CFR 600.144(e), 226(a) or 331(c)(3), as applicable, to provide access to their supporting cost records and financial statements when required.

**Consultants** – Justify the need for any consulting services. Provide the hourly or daily rate along with the basis for the rate. Furnish resumes or similar information regarding qualifications or experience. Provide at least two invoices reflecting hourly or daily rates charged to customers other than the Government. A statement signed by the consultant certifying his or her availability and salary must be provided. If travel or incidental expenses are to be charged, give the basis for these costs.

**Other Direct Costs** -- Provide an itemized list with costs for any other item proposed as a direct cost and state the basis for each proposed item.

**Indirect Costs** -- Provide the name of your cognizant/oversight agency, if you have one, and the name and phone number of the individual responsible for negotiating your indirect rates. If indirect rates have been negotiated with or approved by a Federal Government agency, please provide a copy of the latest rate agreement. If you do not have a current rate agreement, submit an indirect cost rate application which includes the major base and pool expense groupings by line item and dollar amount. In either case, provide a breakdown of the proposed indirect costs for each of your accounting periods included in the application. Identify the rate and allocation base for each indirect cost, such as Overhead, General and Administrative, Facilities Capital Cost of Money, etc.

**Cost Sharing** -- Identify the percentage level and source of cost sharing for the proposed grant project and for individual budget periods. Additionally, the impact of DOE's cost share to the viability of the grant project must be addressed, to include justification for the need for Federal Funds.

NOTE: The total project cost (sum of Applicant and other team members plus DOE cost shares) must be reflected in each project budget form.

A detailed estimate of the cash value including its basis and nature, (e.g., equipment, labor, facilities, cash, etc.), of all contributions to the project by each participant must be provided. Note that "cost-sharing" is not limited to cash investment. In-kind contributions (e.g., contribution of services or property; donated equipment, buildings, or land; donated supplies; or unrecovered indirect costs) incurred as part of the project may be considered as all or part of the cost share. The "cost-sharing" definition is contained in 10 CFR 600.30, 600.101, 600.123, 600.202, 600.224, 600.302, and 600.313.

Fee or profit will not be paid to the recipients. Fee or profit paid to any member of the proposing team having a substantial and direct interest in the commercialization of the demonstration technology is unallowable. Additionally, foregone fee or profit by the Applicant shall not be considered cost sharing under any resulting award. Reimbursement of actual costs will only include those costs that are allowable and allocable to the project as determined by DOE, with reliance on the advice of the Defense Contract Audit Agency (DCAA), in accordance with the applicable cost principles prescribed in 10 CFR 600.127, 600.222, 600.317.

### **Royalty Information:**

- (a) **Cost or Charges for Royalties** -- When the response to this announcement contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of a royalty or license fee:
- (1) Name and address of licensor.
  - (2) Date of license agreement.
  - (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
  - (4) Brief description, including any part or model numbers of each grant item or component on which the royalty is payable.
  - (5) Percentage or dollar rate of royalty per unit.
  - (6) Unit price of grant item.
  - (7) Number of units.
  - (8) Total dollar amount of royalties.
- (b) **Copies of Current Licenses** -- In addition, if specifically requested by the Contracting Officer before execution of the grant, the Applicant shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

### **Grant Subaward Budget File(s)**

The Applicant must provide a separate budget (i.e., budget for each budget year and a cumulative budget) for each subrecipient (including any DOE/NNSA National Laboratory M&O contractor), that is expected to perform work estimated to be more than \$500,000.00 or 50 percent of the total work effort (whichever is less). Use the applicable SF 424 A Excel for Non Construction Programs or the SF 424 C Excel for Construction Programs. These forms are found on the Applicant and Recipient Page at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm). Save each subaward budget in a separate file. Use up to 10 letters of the subrecipient's name (plus .xls) as the file name (e.g., ucla.xls or energyres.xls), and click on "Add Optional Other Attachment" to attach.

### **Grant Subaward Budget Justification File(s)**

Save the budget justification information, in a single file which includes the team member, subrecipient or contractor (including DOE/NNSA National Laboratory M&O contractors) name in the file name, and click on "Add Optional Other Attachment" to attach. Supporting cost detail shall be submitted as indicated by the instructions on the budget form and/or the supporting cost detail requirement described above for the Applicant's budget. The

Applicant shall provide a detailed budget for each subagreement with a subrecipient or contractor (including any DOE/NNSA National Laboratory M&O contractor), that is expected to perform work estimated to be more than \$500,000.00 or 50 percent of the total work effort (whichever is less), identifying costs for each phase (e.g. Definition, Feasibility, and Design) as well as for the total project. The proposed budget must include all costs (both DOE funded costs as well as non-DOE funded costs, i.e., cost sharing). Narrative explanations of budget items should be provided to supplement the Budget Justification Cost Detail Requirements described above for the Applicant's budget.

**DOE/NNSA National Laboratory M&O Contractors** -- If the application includes work to be performed by a DOE/NNSA National Laboratory M&O contractor, include a brief description of the work to be performed and the dollar value associated with the work. Additionally, a Field Work Proposal must be completed and submitted in accordance with the requirements in DOE Order 412.1, Work Authorization System. This Order and the DOE Field Work Proposal form are available at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm). Use up to 10 letters of the National Laboratory's name (plus .pdf) as the file name (e.g., lanl.pdf or anl.pdf), and click on "Add Attachments" in Field 11 to attach.

## **Other Application Requirements**

### **Environmental Evaluation Notification Form(s)**

You must submit a separate Environmental Evaluation Notification Form (EENF) for EACH location/site where work will be performed under the grant project. The EENF and associated instructions can be found at the following website: <http://www.ch.doe.gov/offices/acq/docs/>. Save all completed, signed notification forms as one integrated PDF document named EENF.pdf and click on "Add Optional Other Attachment" to attach.

### **Financial Management System**

In order to qualify for a financial assistance award, the Applicant **must demonstrate a financial management system that satisfies 10 CFR 600.121, 10 CFR 600.220, or 10 CFR 600.311, Standards for Financial Management Systems, by describing how its system meets the seven criteria outlined in 10 CFR 600.121(b), 10 CFR 600.220(a), or 10 CFR 600.311(a).**

The major attribute of an acceptable financial management system is an accounting system that can accumulate, record, and report costs by project. Please include a signed letter certifying that you have reviewed and agree to comply with 10 CFR 600.121, 10 CFR 600.220, or 10 CFR 600.311. Save the information in a single file named "FIN MGMT.pdf," and click on "Add Optional Other Attachment" to attach.

### **DOE/NNSA National Laboratory M&O Contractors Conflict of Interest Disclosure**

Conflicts of interest may exist due to previous efforts performed by a DOE/NNSA National Laboratory M&O contractor or assistance provided in program direction and other mission related activities.

Therefore, the Applicant should prepare and submit a Conflict of Interest Management Plan along with the application. The plan shall describe the DOE/NNSA National

Laboratory M&O contractor's approach to potential, apparent, or actual organizational and individual conflicts of interest regarding itself. Save the information in a single file named "OCI.pdf," and click on "Add Optional Other Attachment" to attach.

### 3. SF-LLL Disclosure of Lobbying Activities

If applicable, complete SF- LLL. This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action.

### Summary of Required Forms/Files

Your application must include the forms from the application package and other documents as shown below:

Name of Document	Format	File Name
<b>SF 424 - Application for Federal Assistance</b> .....	Form	N/A
<b>Other Attachments Form: Attach the following files to this form:</b> .....	Form	N/A
Cover Letter File.....	PDF	Cover_letter.pdf
Project Narrative File (Mandatory Other Attachment).....	PDF	Project.pdf
Other Attachments:		
Appendix A – Site Documentation.....	PDF	site.pdf
Appendix B – Team Letters of Commitment and Agreements	PDF	Team.pdf
Appendix C – Project Management Plan .....	PDF	pmp.pdf
Appendix D – Statements of Interest from Potential Buyers...	PDF	buyer.pdf
Appendix E – Financial Statements.....	PDF	fin_statement.pdf
Appendix F – Financial Model of Demonstration Project .....	Excel	fin_model.xls
Appendix G – Financial Commitment Letters.....	PDF	fin_commitment.pdf
Project Summary/Abstract File.....	PDF	Summary.pdf
Resume File.....	PDF	Bio.pdf
 SF 424A Excel – Grant Budget Information for Non-Construction Programs File.....	Excel	SF424A.xls
Grant Budget Justification File.....	PDF	Budget.pdf
Grant Subaward Budget File(s).....	Excel	See Instructions
Grant Subaward Budget Justification File(s).....	PDF	See Instructions
Budget for DOE/NNSA National Laboratory M&O Contractor File, if applicable.....	PDF	See Instructions
Environmental Evaluation Notification Form(s).....	PDF	EENF.pdf
Financial Management System .....	PDF	FIN MGMT.pdf
DOE/NNSA National Laboratory M&O Contractors Conflict of Interest Disclosure.....	PDF	OCI.pdf
<b>SF-LLL Disclosure of Lobbying Activities, if applicable</b> .....	Form	N/A

#### **D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS**

If selected for award, DOE reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- a. Indirect cost information
- b. Other budget information
- c. Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- d. Representation of Limited Rights Data and Restricted Software, if applicable
- e. Additional Post Selection Information:

Award of a grant requires additional and more detailed information than that needed for selection. Any deficiencies or omissions in the information provided in the application must be addressed and information must be in the appropriate format prior to award of a grant. Due to the time required for preparation and review of the application, information may not be current and may need to be updated. Following selection, the successful Applicant should expect that DOE will request information including, but not limited to, the following list:

- Updated EENF and other project and environmental data/analyses necessary to comply with NEPA requirements
- A fully detailed and properly formatted cost estimate
- An updated Funding Plan; an updated Excel-based model containing financial projections for the income statement, balance sheet, and cash flow statement for all phases of the grant project; an updated sources and application of funds statement covering all phases of the grant project; and current financial statements for the Applicant, funding sources, and critical vendors
- Intellectual property information including unlimited rights data, limited rights data, restricted computer software, and protected data

Additionally, DOE may request audit data to be provided by the Defense Contract Audit Agency.

DOE shall use this information as the basis for negotiation of the fully definitized grant, based on the model Grant attached to this announcement. Failure by the Applicant to provide information in a timely manner will seriously delay award of a grant.

## E. SUBMISSION DATES AND TIMES

### 1. Pre-application Due Date

Pre-applications are not required.

### 2. Application Due Date

Applications must be received by December 1, 2008, not later than 11:00 PM, Eastern Time. You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

## F. INTERGOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372.

## G. FUNDING RESTRICTIONS.

Cost Principles. Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. The cost principles for commercial organizations are in FAR Part 31. DOE/NNSA National Laboratory M&O contract cost principles are at DEAR 970.31 as may be modified by the extant contract.

Pre-award Costs. Subject to the conditions in 10 CFR Part 600, recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles also referenced therein. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

It is important to note that pre-award costs are incurred at the Applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the Applicant does not receive an award or if the award is made for a lesser amount than the Applicant expected.

## H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

### 1. Where to Submit

**APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD.** Submit electronic applications through the "Apply for Grants" function at [www.Grants.gov](http://www.Grants.gov). If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an e-mail to [support@grants.gov](mailto:support@grants.gov).

### 2. Registration Process

You must COMPLETE the one-time registration process (all steps) before you may submit your first application through Grants.gov (See [www.grants.gov/GetStarted](http://www.grants.gov/GetStarted)). We recommend

that you start this process at least three weeks before the application due date. It may take 21 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at <http://www.grants.gov/assets/OrganizationRegCheck.pdf> to guide you through the process. IMPORTANT: During the CCR registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called "Marketing Partner identification Number" (MPIN). When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e. Grants.gov registration).

### 3. Application Receipt Notices

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five e-mails. It is extremely important that the AOR watch for and save each of the e-mails. It may take up to two (2) business days from application submission to receipt of e-mail Number 2. When the AOR receives email Number 5, it is their responsibility to follow the instructions in the e-mail to log onto IIPS and verify that their application was received by DOE. You will need the Submission Receipt Number (e-mail Number 1) to track a submission. The titles of the five e-mails are:

Number 1 - Grants.gov Submission Receipt Number

Number 2 - Grants.gov Submission Validation Receipt for Application Number

Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number

Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number

Number 5 - DOE e-Center Grant Application Received

The last e-mail will contain instructions for the AOR to register with the DOE e-Center. If the AOR is already registered with the DOE e-Center, the title of the last e-mail changes to:

Number 5 - DOE e-Center Grant Application Received and Matched

This e-mail will contain the direct link to the application in IIPS. The AOR will need to enter their DOE e-Center user id and password to access the application.

## Part V - APPLICATION REVIEW INFORMATION

### A. CRITERIA

#### 1. Initial Review Criteria

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the Applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements listed in Part III are satisfied; and (4) the proposed grant project is responsive to the purpose and objectives of the funding opportunity announcement.

Applications that fail to meet one or more of the above requirements will be rejected at the initial review stage. In the event that an application is so rejected, a notice will be sent to the Applicant stating the reason(s) that the application will not be considered for an award under this announcement. Applications passing the initial review shall be subject to a comprehensive merit evaluation.

#### 2. Merit Review Criteria

Applications subject to formal merit review will be evaluated against the criteria below. Included within each criterion are the details that reviewers would consider in evaluating the criteria. Only the technical evaluation criteria will be numerically scored. The financial evaluation criteria will be adjectively rated. (The other selection factors will be evaluated in accordance with Part V, A.3. of this section.) See Section B, Review and Selection Process, of this Part V. **Your application should address all of the merit review criteria as described below.**

Evaluation criteria and relative weights of weighted factors, if any, are as follows:

##### a. Technical Evaluation Criteria

The technical evaluation of the application will be conducted using pre-established weights to determine the relative merits of the application in accordance with the technical evaluation criteria. The weighting factors applied to each technical evaluation criterion to obtain a final evaluation rating for each application appear in this section with each criterion listed below:

##### Criterion 1: Technical Merit of the Proposed Technology (40%)

- Potential of the proposed technology to advance the efficiency, environmental performance, and/or cost competitiveness of coal-fired capacity well beyond that which is in operation now or has been demonstrated to date.
- The score against this criterion shall be based on proposal information relating to the following elements:
  - Adequacy, appropriateness and relevance of the demonstration project to the purposes and objectives of the announcement.
  - Technical readiness for demonstration of the technology at the size scale proposed.



- Reasonableness and adequacy of the technical approach proposed for the demonstration.

**Criterion 2: Commercial Viability and Market Potential of the Proposed Technology (30%)**

- Potential of the proposed technology to be commercialized, i.e., made available to the market, over the next few years. Appropriateness of the demonstration project scale to prove commercial viability and, if intended for existing facilities, applicability to a large portion of existing capacity.
- The score against this criterion shall be based on proposal information relating to the following elements:
  - Extent to which proposed technology enables the continued and increased use of coal for power generation.
  - The potential of the proposed technology to achieve widespread deployment following its demonstration.
  - Extent of project team commitment to the demonstration project and subsequent technology commercialization.

**Criterion 3: Technical and Management Approach/Capabilities of the Grant Project Team (30%)**

- Measures the quality, ability and potential of the grant project team to help realize the overall objectives of the announcement.
- The score against this criterion shall be based on proposal information relating to the following elements:
  - Appropriateness, rationale, and completeness of the proposed Statement of Project Objectives to meet the identified needs.
  - Appropriateness of the scope and duration of the demonstration. Adequacy of project schedule and milestones, Work Breakdown Structure, staffing plan, risk assessment and methodology and reporting activities.
  - Capabilities, experience, and degree of involvement in the project of key technical and management personnel.
  - Corporate experience of team members in similar technology development and demonstration activities.
  - Clarity and logic of project organization with respect to responsibilities and authorities of project participants, including major subrecipients and contractors, and teaming arrangements.

**b. Financial Evaluation Criteria**

An evaluation will determine the responsiveness of the application to the financial requirements of this announcement and will determine the merits of the application based on (1) the information contained in the Applicant's Funding Plan; and (2) the potential for the application to successfully implement the Financial Business Plan. Applications submitted in response to this announcement will be evaluated and adjectively rated against the Financial evaluation criteria listed below.

### Criterion 1: Funding Plan

- Adequacy, completeness and viability of the proposed Funding Plan.
- Financial condition and capacity of proposed funding sources to provide their portion of the grant project costs, including development costs, if applicable.

### Criterion 2: Financial Business Plan

- Reasonableness and completeness of Financial Business Plan demonstrating the potential for the Applicant to successfully implement the demonstration project.
- Completeness of financial information and consistency with the funding and financial business plans.
- Viability of financial projections and financial model.
- Degree of financial commitment to the demonstration project evidenced by Applicant and other project parties.

### 3. Other Selection Factors

#### **a. Grant Budget Information and Financial Management System Factors**

The budget and financial management system evaluation, which is not point scored, will be conducted to review the cost proposal/budget for realism and reasonableness and to determine the following:

- Reasonableness, allowability, and allocation of the proposed total cost and the proposed cost share.
- Completeness and adequacy of the supporting documentation for the cost estimate. This includes whether all significant subcontracts are adequately justified and estimated.
- Adequacy of the Applicant's Financial Management System.
- Correspondence between the SOPO and the budget in terms of format, phase, task, budget period, etc., and adequacy of associated supporting documentation.
- Correspondence between the budget estimate and the magnitude of the work proposed.

## **b. Environmental Factors**

The environmental evaluation will be based on the completed Environmental Evaluation Notification Form (EENF) and other information in the proposal, and is an evaluation of the adequacy and completeness of furnished data. The adjectival rating will reflect the extent to which the applicant has demonstrated:

- (1) awareness of potential project-related environmental impacts and the potential for mitigation of potentially significant environmental impacts;
- (2) knowledge of project-related environmental protection, safety and health requirements and ability to meet them; and,
- (3) a reasoned approach to identification and management of hazards, prevention of accidents, and resolution of issues.

The importance of this information is to assist DOE in fulfilling requirements of DOE NEPA regulations at 10 CFR Part 1021. For example, the EENF will allow DOE to determine whether the proposed action qualifies for a categorical exclusion under Appendix D of the DOE regulations. In the absence of a CX determination, the information will assist DOE with the preparation of an environmental critique for applications in the competitive range [in accordance with 10 CFR Part 1021.216 (d) through (g)], and with the preparation of an environmental assessment (EA) or environmental impact statement (EIS) after award. The environmental critique would be considered by the Selection Official before making the final selection. The EA/EIS process would have to be completed prior to initiation of any action on the proposed project that could have an adverse environmental effect or that could limit the choice of reasonable alternatives. The inability to satisfy the NEPA requirements after an award would result in cancellation of any said award.

## **B. REVIEW AND SELECTION PROCESS**

### **1. Merit Review**

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance." This guide is available under Financial Assistance, Regulations and Guidance at <http://www.management.energy.gov/documents/meritrev.pdf>.

The technical evaluation criteria, which are point scored, have greater importance than the financial evaluation criteria, which are not point scored but adjectivally rated. The adequacy of the budget information and financial management system will be evaluated. The environmental evaluation criteria are adjectivally rated for acceptability.

Upon completion of the merit review of the applications, the Merit Review Panel will provide to the Selection Official the consensus criteria ratings and the overall rating evaluations, any significant issues and recommendations regarding the applications submitted, as appropriate.

2. Selection.

The Selection Official will select the best project that meets the objectives of this announcement, considering the merit review recommendation(s), the other selection factors, the cost share requirement, and the amount of funds available.

3. Discussions and Award.

The Government may enter into discussions with a selected Applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the Applicant.

**C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES.**

DOE anticipates notifying the selected Applicant on or about February 3, 2009, with award anticipated in Fiscal Year 2009.

## Part VI - AWARD ADMINISTRATION INFORMATION

### A. AWARD NOTICES

#### 1. Notice of Selection

DOE will notify the Applicant selected for negotiation of a grant. This notice of selection is not an authorization to begin performance (See Part IV.G with respect to the allowability of pre-award costs.) Organizations whose applications have not been selected will be notified.

#### 2. Notice of Award.

A Notice of Financial Assistance Award issued by the Contracting Officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE; 4. DOE assistance regulations at 10 CFR part 600, and if the award is for research and to a university or non-profit the Research Terms and Conditions and the DOE Agency Specific Requirements; 5. National Policy Assurances To Be Incorporated As Award Terms; 6. Budget Summary; and 7. Federal Assistance Reporting Checklist, which identifies the reporting requirements.

### B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

#### 1. Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR part 600 (See: <http://ecfr.gpoaccess.gov>).

#### 2. Special Terms and Conditions and National Policy Requirements

##### **Special Terms and Conditions and National Policy Requirements.**

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm).

The National Policy Assurances To Be Incorporated As Award Terms are located at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm).

##### **Intellectual Property Provisions.**

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at [http://www.gc.doe.gov/financial\\_assistance\\_awards.htm](http://www.gc.doe.gov/financial_assistance_awards.htm).

### C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2 and in the Deliverables section of the Statement of Project Objectives, attached to the award agreement. See model grant, included as a separate attachment with this announcement, for the reporting requirements for this program.

## **PART VII - QUESTIONS/AGENCY CONTACTS**

### **A. QUESTIONS**

Questions regarding the content of the announcement must be submitted through the "Submit Question" feature of the DOE Industry Interactive Procurement System (IIPS) at <http://e-center.doe.gov>. Locate the program announcement on IIPS and then click on the "Submit Question" button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov). DOE cannot answer these questions.

### **B. AGENCY CONTACT**

Name:	Michael D. Hill
E-mail address:	michael.hill@ch.doe.gov
Fax:	(630) 252-5045
Telephone:	(630) 252-2338

## **PART VIII - OTHER INFORMATION**

### **A. MODIFICATIONS.**

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an e-mail when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

### **B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE.**

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

### **C. COMMITMENT OF PUBLIC FUNDS.**

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

### **D. PROPRIETARY APPLICATION INFORMATION.**

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the Applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the Applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

"The data contained in pages \_\_\_\_\_ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this Applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the Applicant."

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

"The following contains proprietary information that (name of Applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

### **E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL.**

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The Applicant, by submitting its

application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

## **F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM.**

Patent Rights. The Government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See “Notice of Right to Request Patent Waiver” in paragraph G below.)

Rights in Technical Data. Normally, the Government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE’s own needs or to insure the commercialization of technology developed under a DOE agreement.

Special Protected Data Statutes. The provisions of EPCA 2005 that cover DOE’s Clean Power Projects include special data protection for Clean Power Project grants. These provisions allow for protection from public disclosure (including exemptions from subchapter II of chapter 5 of title 5, United States Code) for a period not exceeding 5 years after development of information that results from research and development activities conducted under a grant, of information that: (1) results from demonstration activities carried out under the Clean Power Project program; and (2) would be a trade secret or commercial or financial information that is privileged or confidential if the information had been obtained from and first produced by a non-Federal party participating in a clean power program project.

## **G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER.**

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784. Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

## **H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES.**

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.



## **I. PROPERTY MANAGEMENT AND DISPOSITION**

Title to any equipment under the grant shall vest in the Recipient subject to 10 CFR 600.134, 600.232, or 600.321, as applicable. The use, management, and disposition of all government-furnished property shall be governed by 10 CFR 600.130 thru 600.137, 600.231 thru 600.234, and 600.320 thru 600.325.

## **J. NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE**

The National Environmental Policy Act of 1969 (NEPA) establishes a national policy to ensure that consideration is given to environmental values and factors in Federal planning and decision making. DOE's policy is to comply fully with the letter and spirit of NEPA. To ensure that environmental factors are considered in the decision making process and to promote environmentally responsible decisions, DOE incorporates NEPA requirements early in the planning process for proposed actions.

## **K. AVAILABILITY OF FUNDS**

Funds are not presently available for this award. The Government's obligation under this award is contingent upon the availability of appropriated funds from which payment for award purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available under an appropriate award.

## **L. PREPARATION OF APPLICATION COSTS**

DOE is under no obligation to pay for any costs associated with preparation or submission of applications if an award is not made. If any award is made, such costs may be allowable as provided in the applicable cost principles.

## APPENDICES/REFERENCE MATERIAL

### ANNOUNCEMENT DEFINITIONS:

“Advancement” refers to technological improvements relative to commercial technology or previously demonstrated technology, which may include, but is not necessarily limited to:

- Increase in scale making progress toward utility scale
- Addressing unique issues associated with integration of advanced e-beam technologies with coal fueled power plants.
- Improvements in cost, efficiency or performance requirements for coal fueled power plants.

“Commercial Technology” means technology that is commercially available to the utility industry. To be considered commercially available to the utility industry it must meet the following criteria:

- The technology has been fully demonstrated at the scale typical of use by the utility industry
- The technology has demonstrated on line reliability required by the utility industry
- The technology is widely available to the utility industry with commercial guarantees with regard to process cost, performance, and availability
- The cost of the technology can be accurately estimated

“Demonstration Project”, as used in this announcement, includes the definition, feasibility, design, construction and operation phases of the demonstration.

“Design”, as used in this announcement, means design activities including, but not limited to: overall demonstration plant design, the process concept and how it operates (including process flow diagram(s) with major equipment items and energy and material balances around each major process unit and the overall plant, indicating temperature, pressure, flow rates, and composition of major streams); important process chemistry and engineering concepts; the technology hardware, describing the attributes of the devices or modules or major pieces of equipment, such as geometry and size, environmental performance, and efficiency of operation; principles and engineering analysis and process data to support the design; and, the detailed capital and operating costs for the demonstration plant.

“Grant Project”, as used in this announcement, refers to the scope of work under this grant, which will be limited to the definition, feasibility and design stages of the demonstration, and will be cost-shared by DOE.

“Host Site or Site” means the general location, either within the property boundary of an identified electric power generating or other facility or on a parcel of land with clearly identified ownership and generally defined boundaries, where the demonstration facility will be operated.

“Phase” means the set of related tasks which taken together make up a major category of work (e.g., Project Definition, Feasibility, Design, Construction and Operation) under a Demonstration Project.

“Project Team” means those organizations or parties responsible for proposing and accomplishing all phases of the grant project. The project team includes the prospective Recipient, technology owners, and other Third Parties identified in the application (excluding parties whose sole function is as a source of funds or as an existing commercial user of products typical of those to be produced by the Demonstration Project) who are essential to the successful completion of the proposed grant Project. Where a legal entity has been or will be created to conduct the project,

DOE will consider the participating organizations or parties (partners, joint venture members, etc.) as project team members.

“Selection” means the determination by DOE for a proposed Grant Project to proceed into negotiations that may lead to an Award.

“United States” means The United States of America and its 50 states, the District of Columbia, the Commonwealth of Puerto Rico, and any possession or trust territory of the United States.

**ATTACHMENTS** (see separate files)

Model Grant

*[Model Grant.pdf]*

Budget Justification Guideline

*[Budget Justification Guideline.doc]*

Environmental Evaluation Notification Form (EENF)

*[EENF.doc]*